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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,384	01/11/2001	Hau H. Duong	A-68718-2/RFT/RMS/RMK	2482

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EXAMINER

SINES, BRIAN J

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/780,384

Applicant(s)

DUONG ET AL.

Examiner

Brian J. Sines

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24, 30-36 and 38-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24, 30-36 and 38-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 24, 30 – 36 and 38 – 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bamdad et al. (U.S. Pat. No. 6,541,617 B1) (hereinafter “Bamdad”).

Regarding claims 24, 38, 41 and 42, Bamdad teach a biochip apparatus comprising a biochip having a substrate and an array of detection electrodes (see col. 9, line 46 – col. 10, line 31). Bamdad teaches the incorporation of capture ligands (see, e.g., col. 10, lines 20 – 30). Bamdad teaches the use of an analysis device into which the biochips or cartridges can be inserted for processing (see, e.g., col. 10, lines 39 – 47). Bamdad further teaches the use of labels comprising electron transfer moieties (ETM's) (see, e.g., col. 4, lines 15 – 51). Bamdad teaches current detection during analysis (see, e.g., col. 4, lines 52 – col. 5, line 21; col. 58, lines 1 – 65). Bamdad teaches that a large number of target analytes may be detected using the

disclosed system and methods (see, e.g., col. 6, lines 28 – 32; col. 8, lines 35 – 42). It would have been obvious to a person of ordinary skill in the art to use a plurality of biochips to detect a plurality of different analytes to facilitate effective target analyte screening.

Regarding claims 30 and 31, Bamdad teaches the use of hybridizable nucleic acid capture probes (see, e.g., col. 3, lines 52 – 57; col. 37, lines 5 – 14).

Regarding claim 32, Bamdad teaches that the ETM labels are covalently attached to the target sequences (see, e.g., col. 54, line 59 – col. 55, line 10).

Regarding claims 33 and 34, Bamdad teaches the use of hybridization indicators, such as intercalators (see, e.g., col. 4, lines 52 – col. 5, line 22).

Regarding claim 35, Bamdad teaches use of different target domains (see, e.g., col. 8, lines 3 – 34).

Regarding claim 36, Bamdad teaches the incorporation of a plurality of ETM label probes (see, e.g., col. 36, lines 20 – 26).

Regarding claim 39, Bamdad teaches the use of transition metal complexes (see, e.g., col. 35, line 64 – col. 36, line 10).

Regarding claim 40, Bamdad teaches the incorporation of metallocenes (see, e.g., col. 51, lines 49 – 67).

2. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bamdad in view of Duong et al. (U.S. Pat. No. 6,740,518 B1) (hereinafter “Duong”).

Regarding claim 43, Duong teaches the implementation of analyzing higher harmonic frequencies for signal analysis (see, e.g., Abstract). Therefore, it would have been obvious to a

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person of ordinary skill in the art to utilize higher signal harmonic frequency analysis for facilitating effective detection.

Response to Arguments

Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Sines whose telephone number is (571) 272-1263. The examiner can normally be reached on Monday - Friday (11 AM - 8 PM EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Brian Smith". The signature is fluid and cursive, with the first name "Brian" being more legible than the last name "Smith".